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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/841,665

Filing Date: April 24, 2001

Appellant(s): LING, WANG

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William A. Munck  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 10/28/05 appealing from the Office action mailed 1/24/05.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5962992	Huang et al.	10-1999
6,188,181	Sinha et al.	02-2001
5986574	Colton	11-19999

6675196	Kronz	1-2004
5295154	Meier et al.	3-1994
5847955	Mitchell et al.	12-1998
6333605	Grouev et al.	12-2001

#### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 2, 4-7, 10, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. U.S Patent 5,962,992 in view of Sinha et al. U.S Patent 6,188,181.

Regarding claim 1, Huang et al. teaches a method of controlling plural lighting (col. 5 line 66-line 6 line 2) devices with a single remote control (160) comprising the steps of associating, one by one, each of the plural lighting devices with the remote control, and associating, one by one, each of the plural devices associated with the remote control with a particular function or key on the remote control by the configuration of the slave unit (col. 9 lines 20-31). Huang teaches the use of visual confirmation (col. 10 lines 19-22) but is silent on teaching accepting a user confirmation acknowledging the association of each of plural lighting devices in response to a visual confirmation performed by each of the plural lighting devices upon selection of each of the plural lighting devices. Sinha et al. in an art related addressable lighting system teaches the use of a LED indicator to provide visual confirmation upon the selection of each of the plurality lighting device on the remote control (col. 7 lines 46-56).

It would have been obvious to one of ordinary skill in the art to have a visual confirmation performed by each of the plural lighting devices upon the selection of each of the

lighting devices on the remote control in Huang et al. as evidenced by Sinha et al. because Huang et al. suggests providing visual indication to indicate the association of the devices to the controller and Sinha et al. teaches the use of a LED indicator to provide visual confirmation upon the selection of each of the plurality lighting device on the remote control in order to indicate the signal transmitted from the remote control to the devices is received.

Regarding claim 2, Huang et al. teaches the devices communicate with the carrier sense multiple access protocol (col. 33 lines 37-40).

Regarding claim 4, Huang et al. teaches the visual confirmation includes a predefined sequence of on/off occurrences by flashing a LED (col. 8 line 12).

Regarding claim 10, Huang et al. teaches associating each of plural slave devices with a master remote control (100) comprising the steps of communicating a visual signal indicating the presence indicated by the installation of the unit and accepting a user confirmation acknowledging that the device is to be associated with a particular master device (col. 27 lines 45-64). Huang teaches the use of visual confirmation (col. 10 lines 19-22) but is silent on teaching accepting a user confirmation acknowledging the association of each of plural lighting devices in response to a visual confirmation performed by each of the plural lighting devices upon selection of each of the plural lighting devices. Sinha et al. in an art related addressable lighting system teaches the use of a LED indicator to provide visual confirmation upon the selection of each of the plurality lighting device on the remote control (col. 7 lines 46-56).

It would have been obvious to one of ordinary skill in the art to have a visual confirmation performed by each of the plural lighting devices upon the selection of each of the lighting devices on the remote control in Huang et al. as evidenced by Sinha et al. because

Huang et al. suggests providing visual indication to indicate the association of the devices to the controller and Sinha et al. teaches the use of a LED indicator to provide visual confirmation upon the selection of each of the plurality lighting device on the remote control in order to indicate the signal transmitted from the remote control to the devices is received.

Regarding claim 5, Huang et al. teaches an apparatus for controlling plural lighting devices over a wireless connection by using an IR controller (col. 6 lines 9-11, col. 6 lines 23-25). Huang et al. further teaches a processor (210) for providing commands to said plurality of lighting devices in normal mode (col. 6 lines 35-45), and a means for switching between an enumeration mode (installation and configuration mode) and a normal mode in which the enumeration mode being utilized to associate said plural devices with the apparatus (col. 9 lines 17-30). Huang et al. is however silent on teaching visual confirmation performed by each of the plural lighting devices upon selection of each of the plural lighting devices and the commands to the lighting devices are transmitted over a wireless connection. Sinha et al. in an art related addressable lighting system teaches the use of a LED indicator to provide visual confirmation upon the selection of each of the plurality lighting device on the remote control (col. 7 lines 46-57) and also teaches command to the wireless device is transmitted over a wireless connection (col. 6 lines 8-12).

It would have been obvious to one of ordinary skill in the art to have a visual confirmation performed by each of the plural lighting devices upon the selection of each of the lighting devices on the remote control in Huang et al. as evidenced by Sinha et al. because Huang et al. suggests providing visual indication to indicate the association of the devices to the controller and Sinha et al. teaches the use of a LED indicator to provide visual confirmation upon

the selection of each of the plurality lighting device on the remote control in order to indicate the signal transmitted from the remote control to the devices is received and Sinha et al. also teaches command to the wireless device is transmitted over a wireless connection as an alternative to a wired connection.

Regarding claim 6, Huang et al. teaches the enumeration mode (installation mode) is complete by providing a visual confirmation with the LED (col. 10 lines 19-22).

Regarding claim 7, Huang et al. teaches comprising software for binding specific functions or key sequences from a remote control with specific ones of said plural lighting devices (col. 21 lines 10-25).

Regarding claims 19-20, Huang et al. teaches the visual confirmation includes a predefined sequence of on/off occurrences by flashing a LED (col. 8 line 12).

Regarding claim 21, Huang et al. teaches associating each of plural slave devices with a master remote control (100) by programming and slave units and using the configuration button of the master control unit to slave configuration of the slave unit (col. 9 lines 5-16). Huang et al. also teaches communicating a visual indication that the initialization of the slave device (col. 10 lines 19-22). Huang et al. further teaches communicating a user indication (LED) at the master control that the device is associated with the master remote control unit and a function of the master remote control (col. 10 line 63-col. 11 line 1). Huang is silent on teaching accepting a user confirmation acknowledging the association of each of plural lighting devices in response to

a visual confirmation performed by each of the plural lighting devices upon selection of each of the plural lighting devices. Sinha et al. in an art related addressable lighting system teaches the use of a LED indicator to provide visual confirmation upon the selection of each of the plurality lighting device on the remote control (col. 7 lines 46-57).

It would have been obvious to one of ordinary skill in the art to have a visual confirmation performed by each of the plural lighting devices upon the selection of each of the lighting devices on the remote control in Huang et al. as evidenced by Sinha et al. because Huang et al. suggests providing visual indication to indicate the association of the devices to the controller and Sinha et al. teaches the use of a LED indicator to provide visual confirmation upon the selection of each of the plurality lighting device on the remote control in order to indicate the signal transmitted from the remote control to the devices is received.

Claims 8-9, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. U.S patent 5962992 in view of Sinha et al. U.S Patent 6188181 and further in view of Mitchell et al. U.S Patent 5847955.

Regarding claim 8, Huang et al. teaches a method of utilizing a wireless lighting control protocol comprising the steps of providing a standardized command set for facilitating command and control between a master and plural slave lighting devices which is stored in the EEPROM (col. 6 lines 42-48). Huang et al. further teaches the binding of the slave devices and the master controller is achieved through the processor (col. 13 lines 29-40) which inherently includes the a software application but is not explicit in teaching interposing a layer of software between the

command set and a software application and the layer of software includes means for initialization and binding of the plural slave lighting devices and the master device and is also silent on teaching visual confirmation performed by each of the plural lighting devices upon selection of each of the plural lighting devices. Mitchell et al. in an art related remote control system teaches interposing a layer of software between a command set and a software application and the layer (figure 4). SinHa et al. in an art related addressable lighting system teaches the use of a LED indicator to provide visual confirmation upon the selection of each of the plurality lighting device on the remote control (col. 7 lines 54-57-15).

It would have been obvious to one of ordinary skill in the art to interpose a layer of software between the command set and a software application and further having an visual indicator to upon the selection of each of the plural of the lighting devices in Huang et al. as evidenced by Mitchell et al. in view of Sinha et al. because Huang et al. suggests teaches the binding of the slave devices and the master controller is achieved through the processor which inherently includes the a software application and Mitchell et al. teaches between a command set and a software application and the layer as a means of customization of the software application Sinha et al. teaches the use of a LED indicator to provide visual confirmation upon the selection of each of the plurality lighting device on the remote control in order to indicate the signal transmitted from the remote control to the devices is received.

Regarding claim 9, Huang et al. teaches polling each of the slave devices individually and sequentially to thereby associate each of said devices with the master (col. 10 lines 50-59).

Regarding claim 17, Huang et al. teaches the master device comprises a remote control (160) and associating at least one of the slave devices with a particular key of the remote control (col. 9 lines 20-31).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. U.S patent 5962992 in view of Sinha et al. U.S Patent 6188181 in view of Mitchell et al. U.S Patent 5847955 and further in view of Grouev et al. 6333605.

Regarding claim 11, Huang et al. in view of Sinha et al. teaches the a lighting control system in which the master and the slave devices are in communication (figure 1) but is silent on teaching the master and the slave device communicates using the DALI protocol. One skilled in the art recognizes that DALI is used as a communication protocol as evidenced by Grouev et al. (col. 2 lines 24-27), therefore it is obvious to use DALI as the communication protocol in the lighting system of Huang et al. in view of Mitchell et al.

It would have been obvious to one of ordinary skill in the art for the master and the slave device to communicate using the DALI protocol in Huang et al. in view of Sinha et al. in view of Mitchell et al. as evidenced by Grouev et al. because Huang et al. in view of Sinha et al. in view of Mitchell et al. suggests a lighting control system in which the master and the slave devices are in communication and one skilled in the art recognizes that DALI is used as a communication protocol as evidenced by Grouev et al.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. U.S patent 5962992 in view of Sinha et al. U.S Patent 6188181 and further in view of applicant's admitted prior art.

Regarding claim 12, Huang et al. in view of Sinha et al. teaches a method of controlling plural lighting (col. 5 line 66-line 6 line 2) devices with a single remote control (160) but is silent on teaching the lighting devices communicate using Digital Addressable Lighting Interface protocol. The applicant's admitted prior art teaches lighting devices communicate with a remote control (central control) using a Digital Addressable Lighting Interface protocol (page 1 lines 11-14).

It would have been obvious to one of ordinary skill in the art for the lighting devices to communicate using Digital Addressable Lighting Interface protocol in Huang et al. in view of Sinha et al. as evidenced by the applicant's admitted prior art because Huang et al. in view of Sinha et al. suggests a method of controlling plural lighting devices with a single remote control and applicant's admitted prior art teaches lighting devices communicate with a remote control using a Digital Addressable Lighting Interface protocol and Digital Addressable Lighting Interface protocol is a widely acceptable standard for communicating with lighting devices.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. U.S patent 5962992 in view of Sinha et al. U.S Patent 6188181 in view of applicant's admitted prior art and further in view of Colton U.S Patent 5986574.

Regarding claim 13, Huang et al. in view of Sinha et al. in view of applicant's admitted prior art teaches lighting devices communicate over a network using Digital Addressable Lighting Interface protocol (see response to claim 12) but is however silent on teaching the DALI protocol is supported by an application layer and the remote control comprises a network layer, data link layer, and a physical layer. The reference of Colton teaches the use of a communication protocol based on the International Standard Organization (ISO) Open System

Interconnection in which the CE bus is used as the application protocol (col. 3 line 34-col. 4 line 5) and figure 3. The system as claimed supporting an application layer the remote control comprises a network layer, data link layer, and a physical layer represent a four layer model based on the International Standard Organization (ISO) Open System Interconnection in which the DALI standard is used as the application layer. One skilled in the art recognizes that the Open system communication model is adaptable to different communication protocol making it obvious to use the DALI protocol as the application layer in the Open System Interconnection model.

It would have been obvious to one of ordinary skill in the art for the DALI protocol to be supported by an application layer and the remote control comprises a network layer, data link layer, and a physical layer in Huang et al. in view of Sinha et al. in view of applicant's admitted prior art as evidenced by Colton because Huang et al. in view of Sinha et al. in view of applicant's admitted prior art suggests lighting devices communicate over a network using Digital Addressable Lighting Interface protocol and the system as claimed supporting an application layer with the remote control comprises a network layer, data link layer, and a physical layer represent a four layer model based on the International Standard Organization (ISO) Open System Interconnection in which the DALI standard is used as the application layer. One skilled in the art recognizes that the Open system communication model is adaptable to different communication protocol making it obvious to use the DALI protocol as the application layer in the Open System Interconnection model.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. U.S patent 5962992 in view of Sinha et al. U.S Patent 6188181 in view of applicant's admitted prior art in view of Colton U.S Patent 5986574 and further in view of Kronz U.S Patent 6675196.

Regarding claim 14, Huang et al. in view of Sinha et al. in view of applicant's admitted prior art in view of Colton teaches a communication protocol including data link and physical layer (see response to claim 13) but is silent on teaching the data link and the physical layer support Bluetooth communication. Kronz in an art related remote control device teaches the data link and the physical layer support Bluetooth communication (col. 7 lines 14-16).

It would have been obvious to one of ordinary skill in the art for the data link and the physical layer support Bluetooth communication in Huang et al. in view of Sinha et al. in view of applicant's admitted prior art in view of Colton as evidenced by Kronz because Huang et al. in view of Sinha et al. in view of applicant's admitted prior art in view of Colton suggests the use of the Open System Interconnection having a data link and physical layer and Kronz teaches the data link and the physical layer support Bluetooth communication.

Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. U.S patent 5962992 in view of Sinha et al. U.S Patent 6188181 in view of Meier et al. U.S Patent 5295154.

Regarding claims 15-16, Huang et al. in view of Sinha et al. teaches the use of installation code (address) for identifying the slave unit (col. 9 lines 65-66) and (col. 35 lines 1-

5) and further teaches providing a visual indication when the address is assigned to the device (col. 30 lines 4-6) but is however silent on teaching the use of a short address. Meier et al. in an art related Local Area Network invention teaches the use of a short address in order to minimize the transmission time (col. 9 lines 4-5).

It would have been obvious to one of ordinary skill in the art to use a short address in Huang et al. in view of Sinha et al. as evidenced by Meier et al. because Huang et al. in view of Sinha et al. suggests use of installation code (address) for identifying the slave unit and Meier et al. teaches the use of a short address in order to minimize the transmission time.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. U.S patent 5962992 in view of Sinha et al. U.S Patent 6188181 in view of Mitchell et al. U.S Patent 5847955 and further in view of Meier et al. U.S Patent 5295154.

Regarding claim 18, Huang et al. in view of Sinha et al. in view of Mitchell teaches the use of installation code (address) for identifying the slave unit (col. 9 lines 65-66) and (col. 35 lines 1-5) and further teaches providing a visual indication when the address is assigned to the device (col. 30 lines 4-6) but is however silent on teaching the use of a short address. Meier et al. in an art related Local Area Network invention teaches the use of a short address in order to minimize the transmission time (col. 9 lines 4-5).

It would have been obvious to one of ordinary skill in the art to use a short address in Huang et al. in view of Sinha et al. in view of Mitchell as evidenced by Meier et al. because Huang et al. in view of Sinha et al. suggests use of installation code (address) for identifying the slave unit and Meier et al. teaches the use of a short address in order to minimize the transmission time.

**(10) Response to Argument**

Appellant's sole argument on pages 9-14 is that the reference of Huang or Sinha fails to disclose, teach, or suggests accepting an user confirmation that acknowledges an association involving a lighting device in response to visual confirmation where the visual confirmation is performed by each lighting device upon selection of each lighting device on a remote control. The reference of Huang et al. is not relied upon for teaching accepting an user confirmation that acknowledges an association involving a lighting device in response to visual confirmation. The reference of Sinha et al. is relied upon for teaching accepting an user confirmation that acknowledges an association involving each lighting device in response to visual confirmation by using the Illuminated LED to confirm the selection of a particular light source (col. 7 lines 46-56). Sinha et al. teaches LEDs 40, 41, 42, 43, and 44 are used to select a particular LVM module (col. 7 lines 38-45) which is equivalent to Huang's slave units. The lighting devices are connected to the LVM modules (figure 1C) and the lighting device is selected by selecting the associated LVM module to which the lighting device is attached (col. 8 lines 1-4). Sinha therefore teaches the visual confirmation provided by the LED upon selection of the lighting device. The use of LEDs as evidenced by Huang and Sinha provides visual confirmation of the selected lighting device by the remote control.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Vernal Brown

January 4, 2006

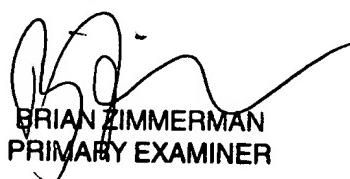
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